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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------------|
| 10/643,256 | 08/18/2003 | Stephen Paul Zadesky | APL1P284/P3111 | 4668 |
| 67673 7590 07/13/2007 APPLE c/o MOFO NOVA 1650 TYSONS BLVD. SUITE 300 MCLEAN, VA 22102 | | | EXAMINER NGUYEN, JIMMY H | |
| | | | ART UNIT 2629 | PAPER NUMBER |
| | | | MAIL DATE 07/13/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/643,256 | Applicant(s) ZADESKY ET AL. | |
| | Examiner Jimmy H. Nguyen | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/25/2007 has been entered. Claims 46-74 are currently pending in the application. An action follows below:

Notice To Applicants

2. The pending claims recite two elements, “**a touchpad**” and “**a rotational input device**”. Note that (i) “a rotational input device” is not found in the original disclosure and (ii) claim 48 recites “the touchpad comprises a rotational input device...” while claim 56 recites “the rotational input device comprises a touchpad...”. Further, as best understood in light of the original disclosure, the claimed touchpad and the claimed rotational input device are **the same one**. Therefore, in order to avoid the unnecessary rejections under 35 USC 112, first and second paragraphs below and to clarify the claimed invention, Examiner suggests the applicants to review all claims and to replace “a rotational input device” with a “touchpad”.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 68 and 72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 68 recites the limitation "**the touchpad**" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 72 recites the limitation "**the touchpad**" in line 1. There is insufficient antecedent basis for this limitation in the claim.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 48, 49, 54-60, 61-65, 68, 69, 72 and 73 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 48 and 49, the disclosure, when filed, does not fairly convey to one of ordinary skill in the art that applicants had in their possession the claimed limitation, "the touchpad comprises a rotational input device..." recited in lines 1-2 of claim 48. The original disclosure does not contain such description and details regarding to the above underlined limitation, especially the element "a rotational input device", so as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 54-60, 68 and 72, the disclosure, when filed, does not fairly convey to one of ordinary skill in the art that applicants had in their possession the claimed limitations, "a rotational input device associated with the housing", "the housing configured to move in multiple

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degrees of freedom relative to the housing and to receive a rotational input from a user”, “the rotational input device comprises a plurality of spatially distinct zones, each of the zones having a corresponding indicator for generating a distinct user input signal when the rotational input device is depressed in the region of the zone”, presently recited in independent claim 54. The original disclosure does not contain such description and details regarding to the above underlined limitations, especially the element “a rotational input device”, so as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Additionally to claims 56-60, these claims further recite limitations relating to “a rotational input device”.

As to claims 61-65, 69 and 73, the disclosure, when filed, does not fairly convey to one of ordinary skill in the art that applicants had in their possession the claimed limitation, “the housing configured to move in multiple degrees of freedom relative to the housing and to receive a rotational input from a user”, presently recited in lines 3-4 of independent claim 61. The original disclosure does not contain such description and details regarding to the above underlined limitation, so as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. Claims 54-60, 61-66, 68-70 and 72-74 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims above, these claims contain limitation “multiple degrees of freedom relative to the housing/frame” (see independent claims 54, 61 and 66), which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure, when filed, specifically page 18, lines 3-5, discloses: “The gimbal may allow the touch pad 72 to move in single or multiple degrees of freedom (DOF) relative to the housing. For example, movements in the x, y and/or z directions and/or rotations about the x, y, and/or z axes (θ_x θ_y θ_z).” **Figures 3A and 3B show a single button zone touchpad in accordance with a first embodiment.** Fig. 3A shows the finger, but not the touchpad, moves in the X and Y directions. Fig. 3B shows the touchpad moving in the Z direction only. In other words, the embodiment of Figs. 3A and 3B does not teach the touchpad moving in multiple degrees of freedom relative to the housing/frame. **Figures 5-7D show multiple button zone touchpad in accordance with a second embodiment.** Figs. 7A-7D show the touchpad moving in the rotational direction only. In other words, the embodiment of Figs. 5-7D does not teach the touchpad moving in multiple degrees of freedom relative to the housing/frame. **Figures 8-11 show multiple button zone touchpad 124 and a separate mechanical button 122 in accordance with a third embodiment.** This third embodiment, similarly to the second embodiment, teaches the touchpad (124) moving in the rotational direction only. In other words, the embodiment of Figs. 8-11 does not teach the touchpad moving in multiple degrees of freedom relative to the housing/frame.

Accordingly, the original disclosure does not fairly describe what multiple degrees of freedom are and how a touchpad, a rotational input device, or a housing is movable in multiple degrees of freedom relative to the frame/housing, as presently claimed.

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8. It is noted Applicants that due to the rejections under 35 USC 112, first and second paragraphs above, the following art rejections are based as best understood by the Examiner.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 46-49, 52-57, 60-62 and 65-74 are rejected under 35 U.S.C. 102(b) as being anticipated by Molne (US 6,243,080 B1, cited in IDS filed on 09/26/2006).

As to claims 46-49, 52, 54-57, 61, 62, and 66, Molne discloses a portable media player (a wireless communication device 10, see Fig. 1, col. 7, lines 30-34) comprising **a housing** (see Fig. 1) including **a frame** (a casing 17, see Fig. 1 or 2); and **a touchpad/rotational input device** (a touch sensitive panel 30, see Figs. 2-5) disposed within the housing (see Figs. 1-4).

Further, Molne teaches that a user's contact finger is free to move any direction on the touch-sensitive panel (30) to cause the cursor to move in such direction (see col. 3, lines 18-36). Based on this disclosure, Mohne teaches a touchpad (30) configured to receive rotational inputs when the user moves a contact finger in a rotational direction.

Molne further teaches that the touch sensitive panel (30) is rotated or hingedly rotated to enable the user to make a select function (see col. 2, lines 13-21 and col. 5, lines 15-24). Based on this disclosure, Molne teaches the touchpad capable of a gimbal action relative to the housing, wherein the gimbal action of the touchpad is configured to enable a user of the portable media player to make media a selection.

Regarding to the claimed limitation, “**the touchpad movable in multiple degrees of freedom relative to the frame**”, Molne discloses that the touch sensitive panel (30) is hingedly rotated (see col. 5, lines 15-24). Based on this disclosure, Molne teaches that the touchpad rotates in a clockwise (or counterclockwise) direction when the user presses the touchpad and rotates in a counterclockwise (or clockwise) direction when the user’s finger lifts his finger away the touchpad. Accordingly, Molne teaches the touchpad movable in multiple degrees of freedom relative to the frame.

Regarding to the claimed limitations, “**the touchpad/rotational input device comprises a plurality of spatially distinct zones, each of the zones having a corresponding indicator for generating a distinct user input signal when the touchpad/rotational input device is depressed in the region of the zone**”, Molne discloses at col. 6, lines 31-46 that the touch-sensitive panel 30 (i.e., the claimed rigid user interface platform or touchpad) including a portion corresponding to the keypad, so that each key of the keypad corresponding to an input zone having a corresponding one of the movements indicator for generating a distinct user input signal when the touch-sensitive panel 30 (i.e., the claimed rigid user interface platform) is moved in the region of the input zone. Based on the mentioned passage, Molne implicitly discloses the above underlined limitations.

Accordingly, all the limitations of these claims are read in the Molne reference.

As to claims 53, 60, and 65, Molne discloses an input surface of the touchpad/rotational input device substantially co-planer with an external surface of the housing (see Fig. 3).

As to claims 67-70, Molne discloses that the housing defines a space and the touchpad and the housing are configured to enable the touchpad to float within the space of the housing (see Figs. 2-5).

As to claims 71-74, Molne discloses at **col. 6, lines 31-46** that the touch-sensitive panel 30 including a portion corresponding to the keypad, so that each key of the keypad corresponding to an input zone having a corresponding one of the movements indicator for generating a distinct user input signal when the touch-sensitive panel 30 (i.e., the claimed rigid user interface platform) is moved in the region of the input zone. Based on the mentioned passage, Molne discloses that each of plural keys of the touchpad is configured to enable a clicking action.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 50, 51, 58, 59, 63, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molne as applied to claims 46, 54, and 61, and further in view of Trent, JR. et al. (US 2004/0252109 A1), hereinafter Trent.

As to these claims, Molne as discussed in the rejection of independent claims 46, 54, and 61 above, Molne discloses all the claimed limitations of these claims except that Molne does not teach that the touchpad is based on a polar coordinate system as presently recited in claims 50, 58 and 63 and the touchpad is circular as presently recited in claims 51, 59, and 64.

However, Trent discloses a circular touchpad (a touch sensor, e.g., see Fig. 3, 37, or 38) based on a polar coordinate system (see paragraph [0090]). Trent further teaches that the benefit of using the circular touchpad (the touch sensor) based on the polar coordinate system is to provide a user a number of functions associated with a particular application (see Fig. 38; paragraph [0137]). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to replace the Molne rectangular touchpad with a circular touchpad based on a polar coordinate system, in view of the teaching in the Trent reference, because this would provide a user a number of functions associated with a particular application of the Molne device, as taught by the Trent reference (see Fig. 38; paragraph [0137]).

13. Claims 50, 51, 58, 59, 63, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molne and further in view of Matzke et al. (US 4,736,191), hereinafter Matzke.

As to these claims, Molne as discussed in the rejection of independent claims 46, 54, and 61 above, Molne discloses all the claimed limitations of these claims except that Molne does not teach that the touchpad is based on a polar coordinate system as presently recited in claims 50, 58 and 63 and the touchpad is circular as presently recited in claims 51, 59, and 64.

However, Matzke discloses a circular touchpad (a touch pad 14, see Fig. 1) based on a polar coordinate system (see col. 8, lines 22-27). Matzke further teaches that the benefit of using the circular touchpad (the touch sensor) based on the polar coordinate system is to provide a user capable of commanding movement of the cursor in essentially any angular direction rather than being limited to translation of the cursor in only certain angular directions (see col. 3, lines 26-31). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of

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the invention was made to replace the Molne rectangular touchpad with a circular touchpad based on a polar coordinate system, in view of the teaching in the Matzke reference, because this would provide a user capable of commanding movement of the cursor in essentially any angular direction rather than being limited to translation of the cursor in only certain angular directions, as taught by the Matzke reference (see col. 3, lines 26-31).

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 46-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 7, 11, and 16 of U.S. Patent No. 7,046,230 B2, hereinafter Patent230 in view of Molne.

Claims 1, 6, 7, 11 and 16 of Patent230 are directed to a portable media player comprising all limitations of the pending claims 46-66 except for the limitations, “a touchpad/rotational input device capable of a gimbal action relative to the housing, wherein the gimbal action of the user input apparatus enables a user of the portable media player to make media selections and enables the touch panel to pivot relative to the frame and the housing”, “the touchpad/rotational input device comprising a plurality of spatially distinct zones, each of the zones having a

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corresponding indicator for generating a distinct user input signal when the touchpad/rotational input device is depressed in the region of the zone”, and “a touchpad movable in multiple degrees of freedom relative to the frame”, as presently claimed. However, Molne expressly teaches the above underlined limitations, see the rejection to claims 46-49, 52, 54-57, 61, 62, and 66. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the touchpad of the device of claims 1, 6, 7, 11 and 16 of Patent230, in view of the teaching in the Molne reference, because this would provide a user a touchpad with selector, thereby allowing the user to select and to normally operate the touchpad without removing the finger from the touchpad, as taught by Molne (see col. 2, lines 5-44).

Response to Arguments

16. It is noted Applicants that the objection to claim 52 and the rejection under 35 USC 112, second paragraph, to claims 48-49 in the previous Office action dated 03/23/2007 have been rendered moot in light of the amendment to these claims.

17. With respect to the rejection under 35 USC 102(b) as being anticipated by Molne in the Office action dated to 03/23/2007, Applicants argue that Molne does not teach a touch sensitive panel that both rotates and moves vertically (see page 8, first paragraph, of the amendment). Examiner agrees; however, none of the pending claims, especially independent claims 46, 54, 61 and 66, requires the touchpad **both** rotating and moving vertically, as argued by Applicants.

18. In response to Applicants' argument with respect to the newly amended claims 54, 61 and 66, examiner directs Applicants to new detailed rejections above.

Conclusion

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19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675.

The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN
July 9, 2007



Jimmy H. Nguyen
Primary Examiner
Technology Division: 2629